

Fig. 1A Physical layer configuration

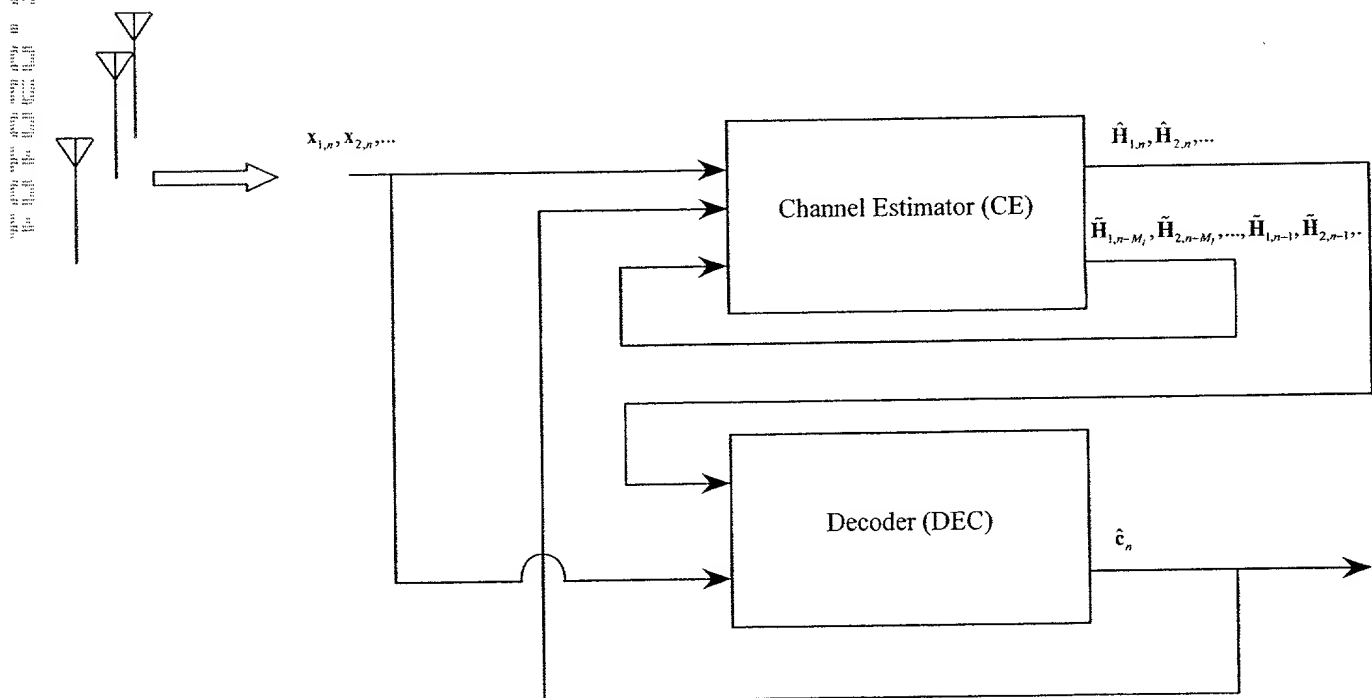


Fig. 1B Baseband Processing Block Diagram (at time instant  $n$ )

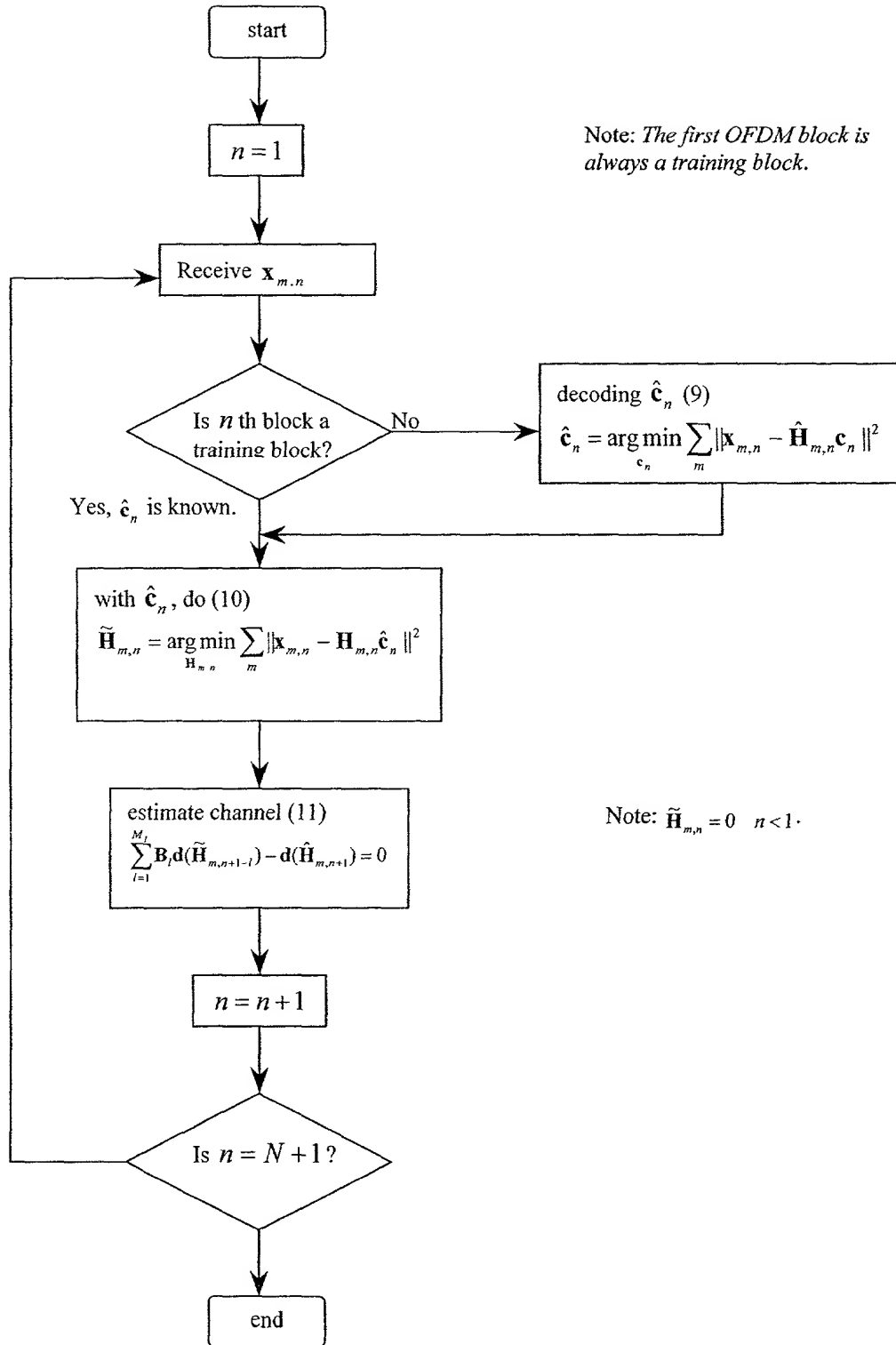


Fig. 1C Flowchart of the Original Approach

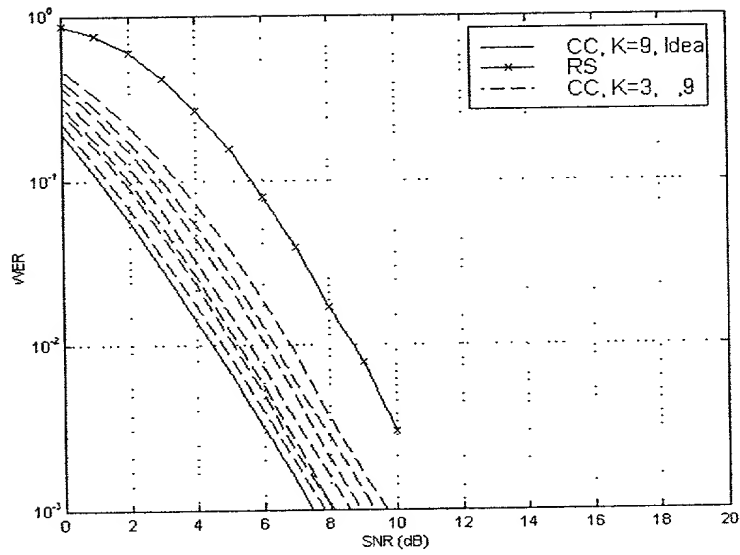


Fig. 2 Comparison of RS and convolutional codes;  
the maximum Doppler frequency is 40 Hz

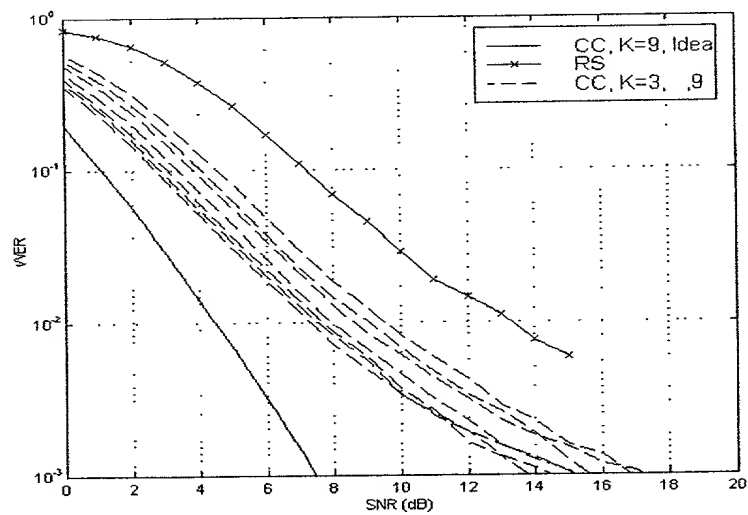


Fig. 3 Comparison of RS and convolutional codes;  
the maximum Doppler frequency is 200 Hz

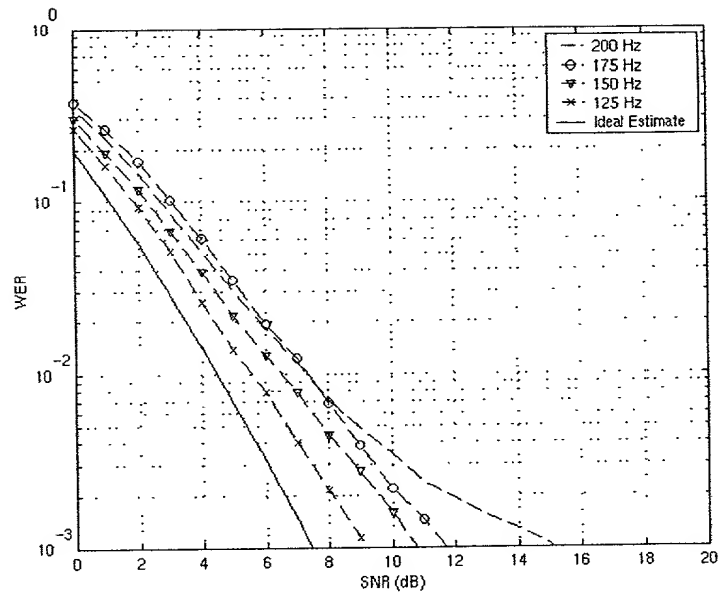


Fig. 4 Performance of the K=9 CC at different maximum Doppler frequencies

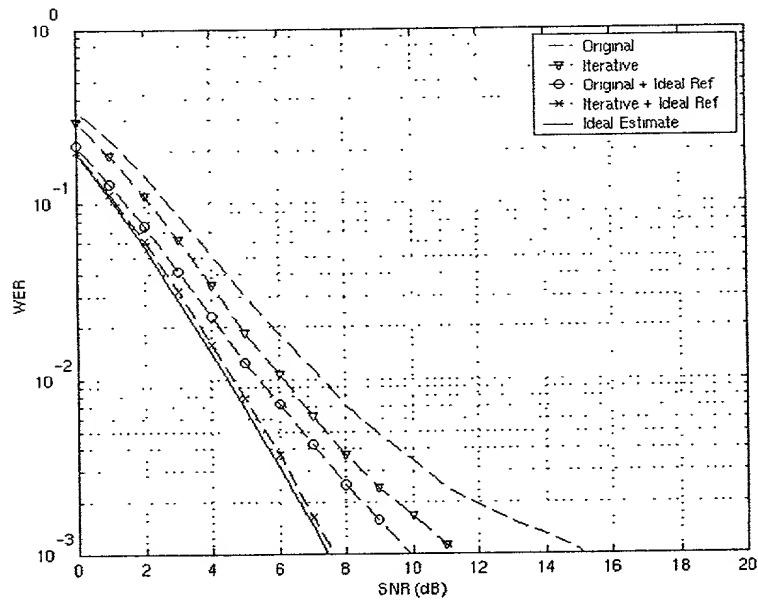


Fig. 5. Performance of the iterative approach at 200 Hz maximum Doppler frequencies; K=9

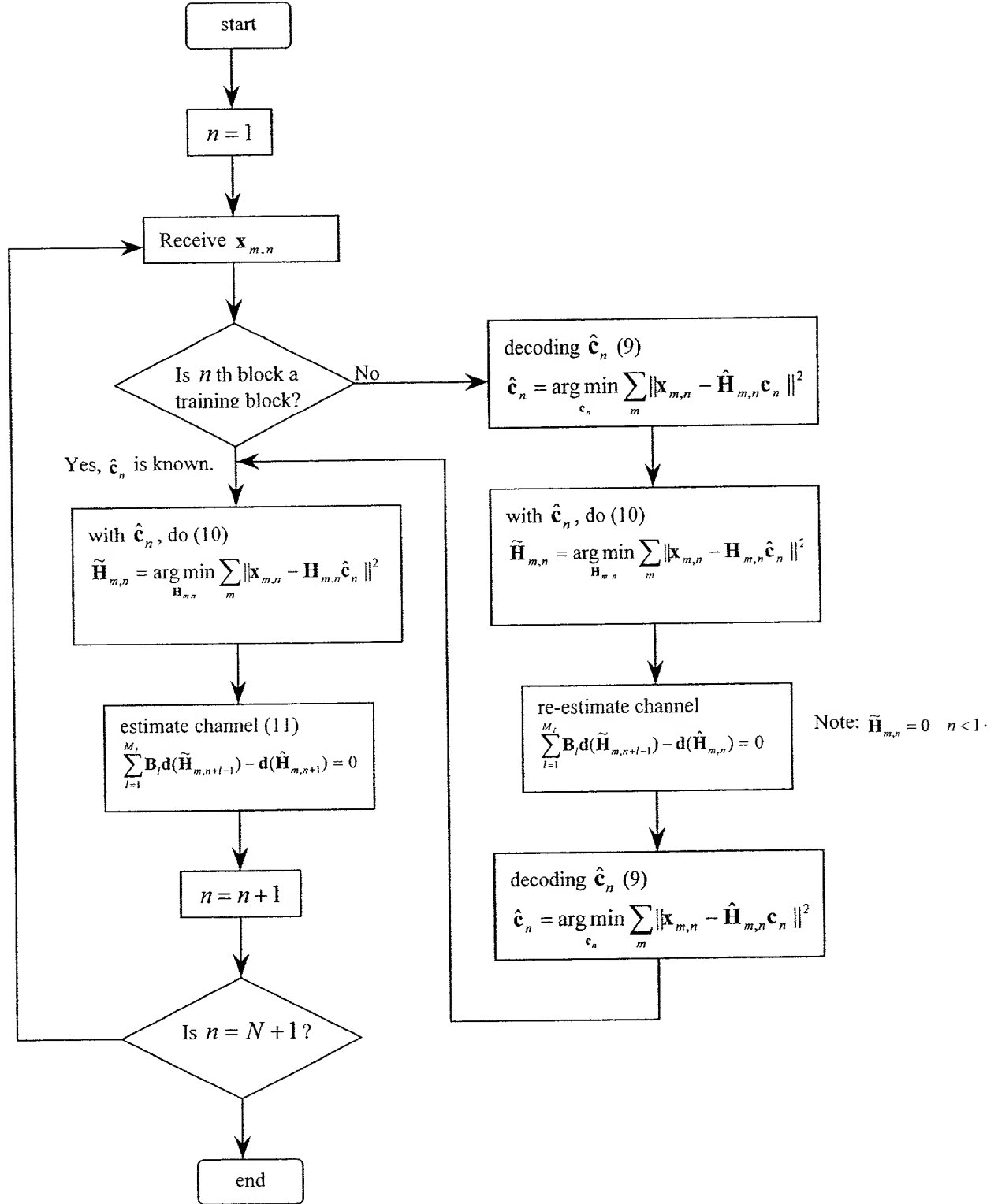


Fig. 6A Flowchart of the Iterative Processing

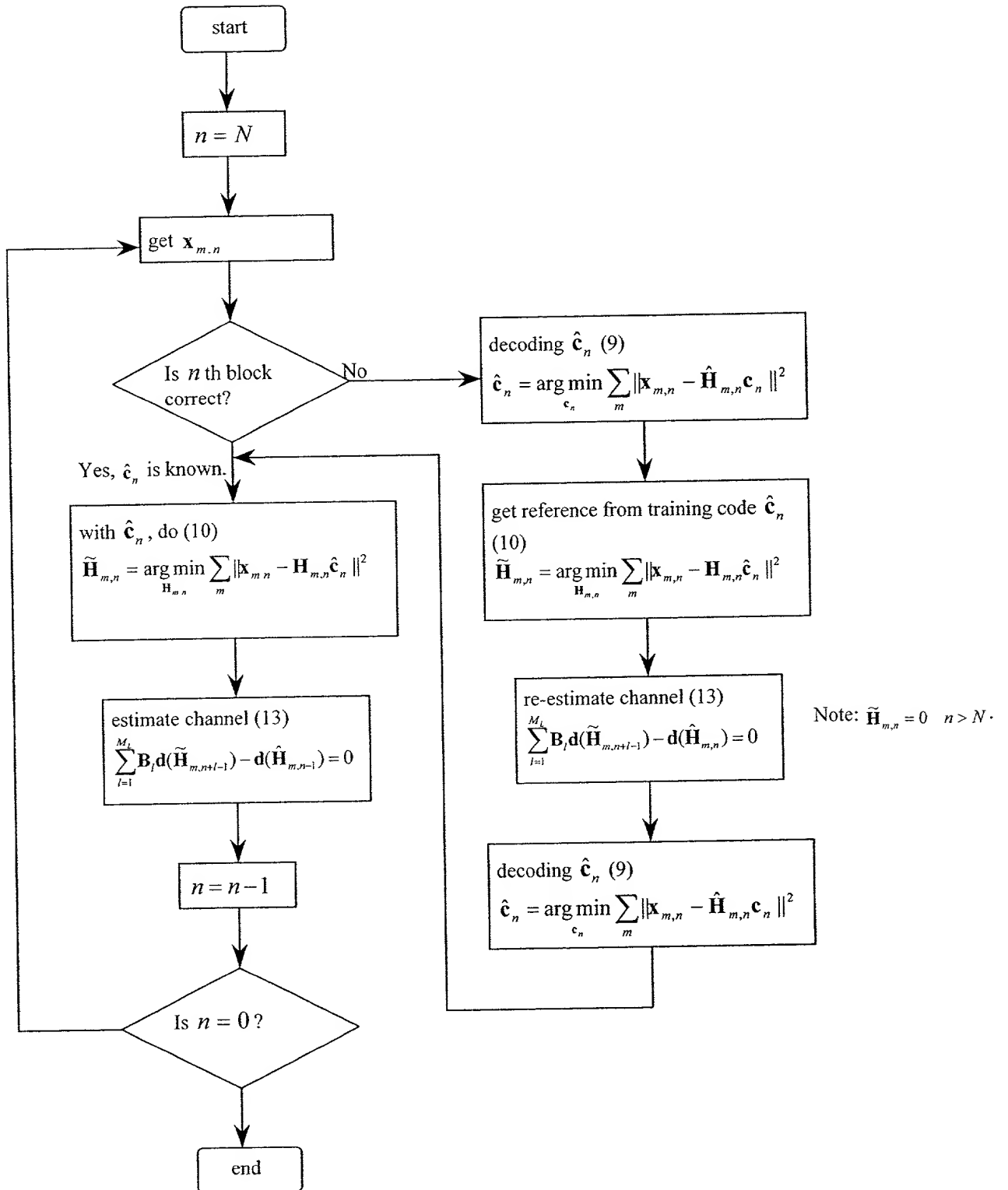


Fig. 6B Flowchart of the Iterative Backward Processing

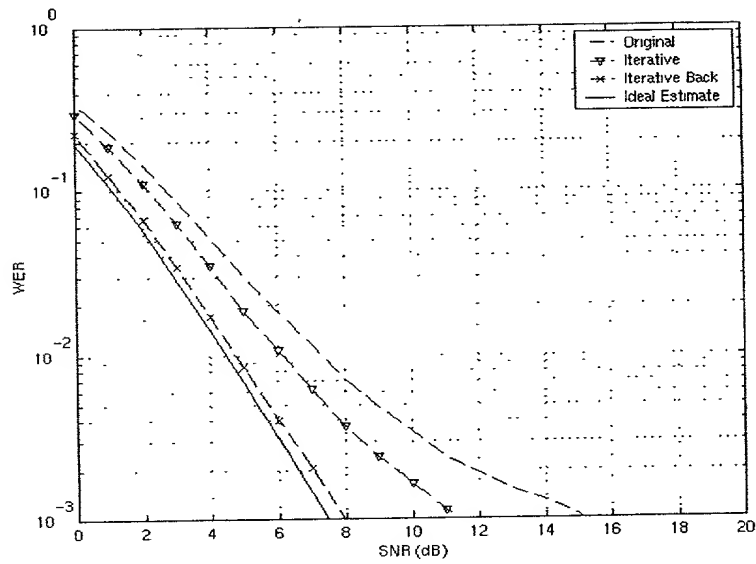


Fig. 7. Performance of iterative backward-processing approach at 200 Hz maximum Doppler frequency;  $K=9$

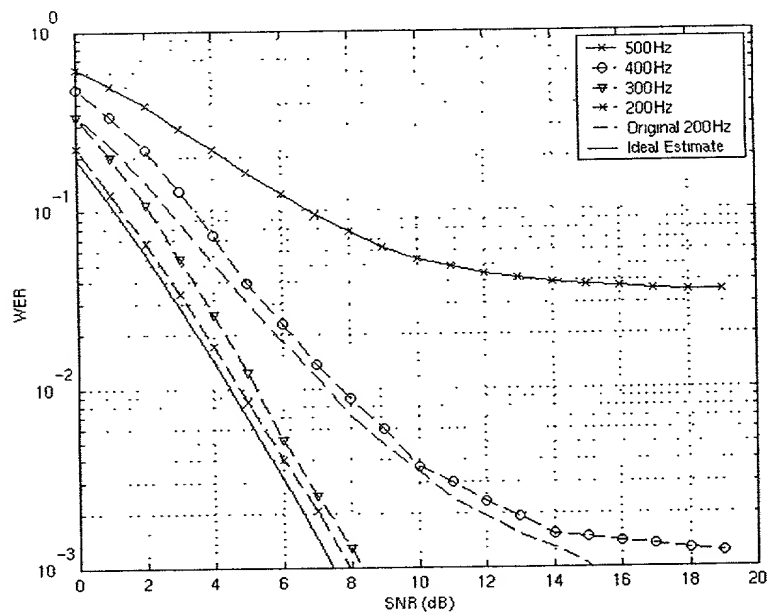


Fig. 8. Performance of iterative backward-processing approach at different maximum Doppler frequencies;  $K=9$

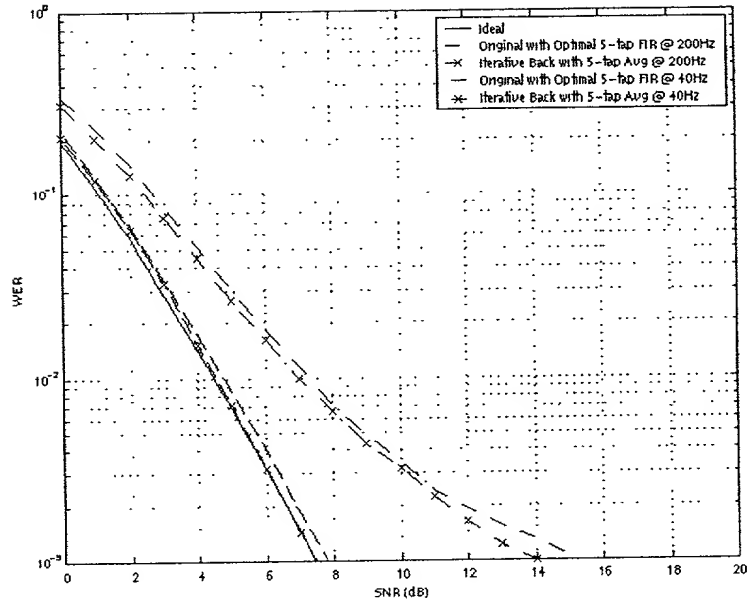


Fig. 9. Comparison of systems having different time-domain FIR estimators; K=9



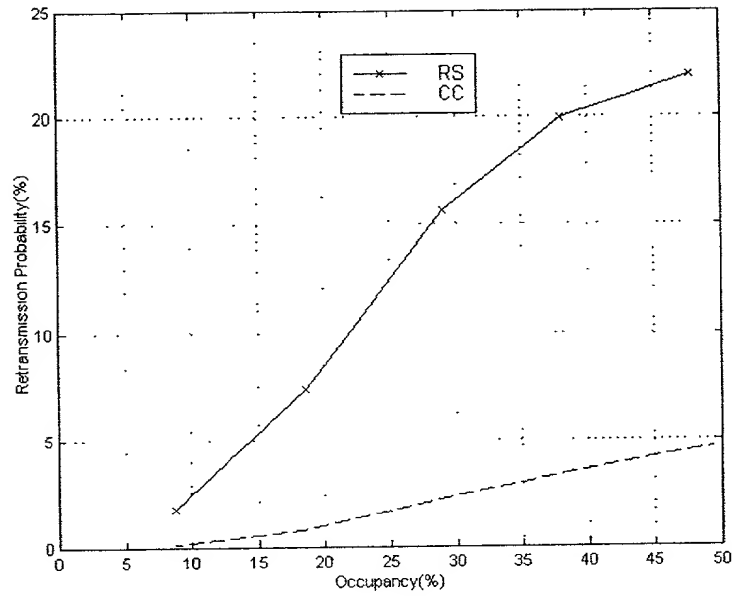


Fig. 10. Average retransmission probability as a function of occupancy per sector; 8 slots and 3 RF carriers ( $< 2.5$  MHz) are reused in every base station, each with three sectors, using DPA; original (non-iterative) method,  $K=5$ , 40 Hz Doppler or  $K=9$ , 125 Hz Doppler

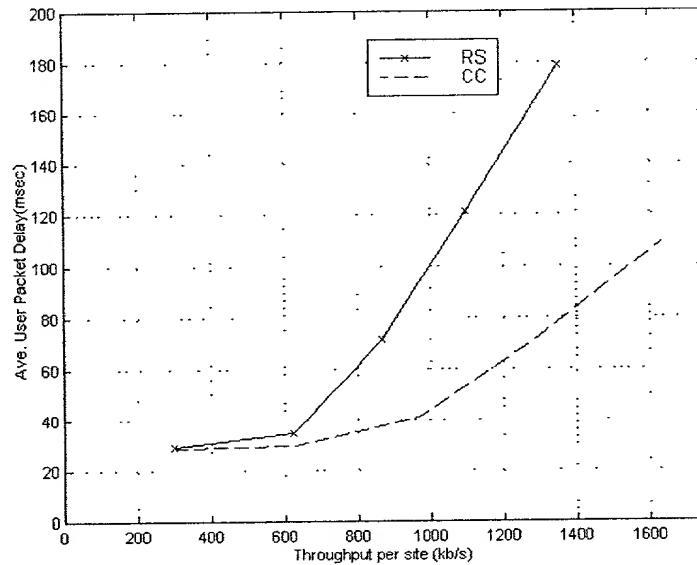


Fig. 11. Average delay of delivered packets as a function of throughput per base station, each with three sectors; 8 slots and 3 RF carriers ( $< 2.5$  MHz) are reused in everywhere using DPA; original (non-iterative) method,  $K=5$ , 40 Hz Doppler or  $K=9$ , 125 Hz Doppler

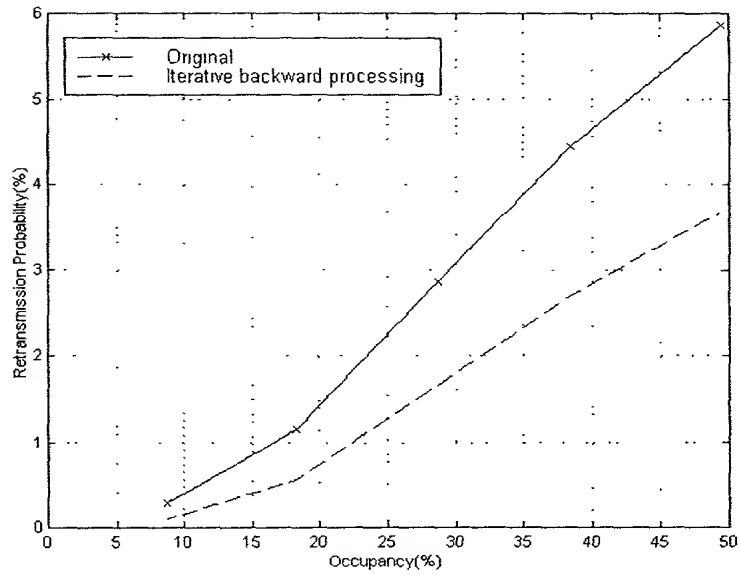


Fig. 12. Average retransmission probability as a function of occupancy per sector; 8 slots and 3 RF carriers ( $< 2.5$  MHz) are reused in every base station, each with three sectors, using DPA;  $K=9$ , 200 Hz Doppler

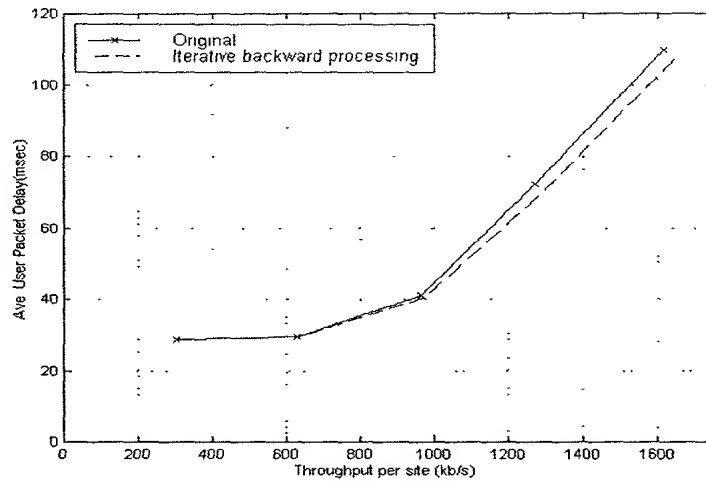


Fig. 13. Average delay of delivered packets as a function of throughput per base station, each with three sectors; 8 slots and 3 RF carriers ( $< 2.5$  MHz) are reused in everywhere using DPA;  $K=9$ , 200 Hz Doppler